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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/559,175	04/27/2000	Wataru Matsumoto	2611-0125P	2265
<div>7590 09/19/2007 Birch Stewart Kolasch & Birch LLP P O Box 747 Falls Church, VA 22040-0747</div>			<div>EXAMINER HARPER, KEVIN C</div>	
			<div>ART UNIT 2616</div>	<div>PAPER NUMBER</div>
			<div>MAIL DATE 09/19/2007</div>	<div>DELIVERY MODE PAPER</div>

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/559,175

Applicant(s)

MATSUMOTO ET AL.

Examiner

Kevin Harper

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4, 6-8, 10-12 and 14-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-4, 6-8, 10-12 and 14-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Response to Arguments

Applicant's arguments filed June 21, 2007 have been fully considered but they are not persuasive.

1. Applicant argued that Malcom does not disclose a periodic transmission timing. However, the system of Malcom transmits data in assigned and re-occurring time slots (figs. 7-8; col. 8, lines 61-65).
2. Applicant argued that Chow does not disclose assigning data bits to symbols before assigning them to bit spaces allocated for transmission. However, the claims do not specifically recite that the organizing step precedes the assigning step. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 3, 7, 11 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Malcolm et al. (US 5,781,540).

3. Regarding claims 3, 7, 11 and 15, Malcolm discloses a communication system (fig. 1) that sets a periodic transmission timing in accordance with a network transmission path (abstract, lines 1-11) such that each period includes a data transmission time which is suitable for data transmission in the period (note: assigned time slot in the frame - col. 8, lines 57-60) and a quasi-data transmission period which is the time other than the data transmission time in the same period (note: other assigned time slots - fig. 7), where first and second data are transmitted by multiplexing (fig. 9, items 308, 310, and/or 312). The communication system includes a set of received data bits to be transmitted over several periods of the transmission timing (col. 1, lines 35-47) and the data bits are organized into units of symbols (fig. 9) and assigned bit spaces allocated for transmission in such a manner that all the data bits in each of the symbols are transmitted on the network transmission path during the data transmission time of the same period of the transmission timing (fig. 7, access slot, item 300 or 302; fig. 9 - guard time). The data bits of the first data (fig. 9, item 312) are transmitted during a particular period of the transmission timing are organized into symbols that are transmitted on the network transmission path during the data transmission time of the particular period. The data bits of the second data (fig. 9, item 308 or 310) are transmitted during the particular period are organized into one or more symbols which are transmitted on the network transmission path in the portion of the data transmission time of the particular period where the first data has not been assigned. The system includes a receiver (fig. 2, item 54) for receiving the transmitted data that is reproduced (col. 8, line 60 through col. 9, line 10).

Claims 2, 4, 6, 8, 10, 12, 14, 16-17 and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Chow (US 6,009,122).

4. Regarding 2, 4, 6, 8, 10, 12, 14, 16-17, 24, Chow discloses a transmission device (fig. 5) that transmits a set of data bits according to a periodic transmission timing (fig. 4) where each period

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includes a first and second transmission timing (col. 9, lines 14-21; note: more than one downstream/upstream frame per superframe - fig. 8) and the data bits are transmitted over several periods of the transmission timing. The device organizes data bits into units of data symbols (fig. 5), allocates a constant number of data bit spaces for transmission during each period of the transmission timing (fig. 8; note: frames per superframe; col. 15, lines 52-57), where the data spaces are allocated to achieve a higher transmission rate during the first transmission time than the second transmission time (fig. 8; col. 11, lines 17-25; col. 14, lines 5-30; fig. 9; note: FEXT periods versus NEXT periods), and assigns the data bits in the data symbols to the allocated data bit spaces such that all of the data bits in each data symbol are transmitted from the transmission device during the same period of the transmission timing (fig. 4, Q; note: all symbols are transmitted within the assigned times and no data symbols are transmitted in the quiet times - col. 2, lines 37-39). Further regarding claims 2, 4, 6, 8, 10, 12 14 and 16, the suitable data transmission time is represented by higher interference periods (i.e., FEXT periods) and the other time period is represented by lower interference periods (i.e., NEXT periods), where any data can be transmitted during those two periods of the frame or superframe (col.2, lines 55-60; col. 7, lines 32-41; col. 8, lines 41-60; col. 10, line 32 through col. 11, line 25). The transmitted data is reproduced at the receiver (fig. 2; col. 8, line 60 through col. 9, line 10).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 18-23 and 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chow (US 6,009,122).

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5. Regarding claims 18 and 25, Chow does not disclose transmitting no data within a given time period. However, Chow discloses transmitting less data during a NEXT time period that is subject to more interference (col. 10, line 66 through col. 11, line 25). Therefore, it would have been obvious one skilled in the art at the time the invention was made to transmit no data during the second time period in the invention of Chow in order to prevent the transmission of unacceptable data (col. 10, lines 45-65; col. 14, lines 10-11; figs. 10A-10B, step 1008).

6. Regarding claims 19 and 26, the first transmission timing corresponds to FEXT (col. 10, lines 39-45).

7. Regarding claims 20 and 27, the data symbols are transmitted during respective times during frames and superframes (fig. 4; col. 11, lines 43-46;).

8. Regarding claims 21-23 and 28-30, the bits may be allocated uniformly and are assigned as necessary (col. 13, lines 60-64; note: the bit allocations may be the same for several symbols or frames), where the time periods correspond to NEXT and FEXT (col.2, lines 55-60; col. 7, lines 32-41; col. 8, lines 41-60; col. 10, line 32 through col. 11, line 25).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the

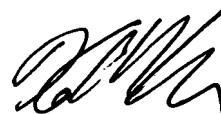
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date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Harper whose telephone number is 571-272-3166. The examiner can normally be reached weekdays from 11:00 AM to 7:00 PM ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild, can be reached at 571-272-2092. The centralized fax number for the Patent Office is 571-273-8300. For non-official communications, the examiner's personal fax number is 571-273-3166 and the examiner's e-mail address is kevin.harper@uspto.gov.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications associated with a customer number is available through Private PAIR only. For more information about the PAIR system, see portal.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin C. Harper

September 16, 2007